

What is claimed is:

1           1. An optical switching system, comprising:  
2           a signal input unit operable to input an optical packet  
3           signal that includes an optical label signal converted by a direct  
4           modulation method from an electric label signal that has a  
5           frequency that corresponds to a destination of the optical packet  
6           signal;  
7           an optical-to-electrical conversion unit operable to  
8           convert the optical packet signal, which has passed through an  
9           optical filter that allows only signals with wavelengths within  
10          a predetermined range to pass through itself, into an electric  
11          signal;  
12          an extracting unit operable to extract the electric label  
13          signal from the electric signal;  
14          an electric power level detecting unit operable to detect  
15          an electric power level of the extracted electric label signal;  
16          a port determining unit operable to determine, based on  
17          the detected electric power level, a port to which the optical  
18          packet signal is to be output; and  
19          a signal output unit operable to output the optical packet  
20          signal to the determined port.

1           2. An optical switching system, comprising:  
2           a signal input unit operable to input an optical packet  
3           signal that includes an optical label signal generated by  
4           phase-modulating an optical signal based on an electric label  
5           signal that has a frequency that corresponds to a destination

6 of the optical packet signal;  
7 an optical-to-electrical conversion unit operable to  
8 convert the optical packet signal, which has passed through an  
9 optical filter that allows only signals with wavelengths within  
10 a predetermined range to pass through itself, into an electric  
11 signal;  
12 an extracting unit operable to extract the electric label  
13 signal from the electric signal;  
14 an electric power level detecting unit operable to detect  
15 an electric power level of the extracted electric label signal;  
16 a port determining unit operable to determine, based on  
17 the detected electric power level, a port to which the optical  
18 packet signal is to be output; and  
19 a signal output unit operable to output the optical packet  
20 signal to the determined port.

1 3. The optical switching system of Claim 1, wherein  
2 the electric label signal has a sinusoidal waveform.